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Editorial

The Archaeology of Human-Bird Interactions: Essays in Honour of Dale Serjeantson. Volume 1



1. Introduction

This volume represents the first of two issues of *Quaternary International* dedicated to the exploration of past human-bird interactions. The papers published here were initially delivered orally or as posters as part of the 9th ICAZ Bird Working Group Meeting, *The Archaeology of Human-Bird Interactions. A Conference in Honour of Dale Serjeantson*, which took place at the University of Sheffield (UK) from 8–11 June 2018 (Fig. 1). The meeting was organised by members of the Zooarchaeology Team of the Department of Archaeology, University of Sheffield, in collaboration with Historic England and Cardiff University. The ICAZ Bird Working Group (BWG), originally founded in 1991, is composed of zooarchaeologists, archaeologists, palaeontologists and zoologists interested in past human-bird interactions and is part of the International Council for Archaeozoology (ICAZ). For this particular occasion, it was also possible to include a few papers with a historical approach, further enhancing the inter-disciplinary depth of the volume.

The conference was attended by researchers from around the world and included two days of scientific presentations, as well as a guided excursion to the Peak District, a national park rich in birds and archaeology.

Thirty-six papers were delivered at the conference and twenty-one posters were displayed. Most of these can be found in their written versions in either this or the next issue of *Quaternary International* dedicated to the proceedings of the conference. They cover all periods in human history, ranging from Palaeolithic to Post-Medieval times, and are presented in this volume in broad chronological order. More than twenty countries, distributed world-wide, were represented both in terms of the work-location of the contributors and the setting of the research. A few papers, however, focus on a methodological approach, rather than geographical location. Although most of the contributions are European-based, North and South America, as well as Asia, are also represented. Research in Africa and Oceania is not featured, but some of the delegates were Australian-based. Thirty-five of these contributions had women as leading authors and twenty-two had men. The organising committee of the conference – composed of Umberto Albarella (University of Sheffield), Polydora Baker (Historic England), Evelyne Browaeys (University of Sheffield), Chiara Corbino (University of Sheffield), Jacqui Mulville (Cardiff University), Ged Poland (University of Sheffield) and Fay Worley (Historic England) – also had a predominance of women. This team has now become the guest editorial board for this volume (and the following one) (Fig. 2).

2. Dale Serjeantson

It is a tribute to the popularity, as a researcher and person, of the dedicatee to the conference and its proceedings – Dale Serjeantson – that the Sheffield meeting was the largest gathering ever produced by

the ICAZ Bird Working Group. The internationality and diversity of the participants also reflect the fact that Dale's work has attracted much interest across the globe.

At an international conference a few years ago, one of us (UA) happened to introduce Dale to an American colleague. When she heard Dale's name, she paused for a moment, and then exclaimed excitedly "Oh, you are the bird lady!" As the conversation between the two ensued, UA was smiling inside because it reminded him of the first conversation he had ever had with Dale, back in 1991, when she introduced herself and he said to her "Ah, you are the editor of *Diet and Crafts in Towns*!". From then on, and for almost thirty years, the two remained close friends. Almost as much as artists, researchers' reputations often live through their best-known works. In this respect, it was not inappropriate to call Dale "The Bird Lady", as she has contributed hugely to the development of archaeo-ornithology as an important area of study within archaeology – in fact, arguably, more than anybody else.

It is for this reason that we thought it fitting to organise this tribute to her as part of an ICAZ Bird Working Group Meeting. Dale has, of course, been a staunch member of the Working Group. She contributed to the first meeting, organised by Arturo Morales in Madrid in 1991 (suitably, Arturo was present at the Sheffield meeting, and has contributed to this volume), where she presented an interesting actualistic study of bird bone taphonomy (Serjeantson et al., 1993). She went on to organise the second meeting in Southampton, which was highly successful and well-attended; many of the researchers who eventually became key players in the study of bird bones in archaeology were present (e.g. Zbigniew Bocheński, Eduardo Corona-M, Christine Lefèvre, John Stewart, and a very young Erika Gál!). The presentations were published as a monographic issue of the *International Journal of Osteoarchaeology* (Serjeantson, 1997). This proved to be essential for the promotion of the Bird Working Group as one of the most active and well-established of the ICAZ Working Groups. Dale would remain a strong supporter of the Group, acting for several years as its liaison officer, and contributing regularly to its conferences, such as those in Cracow (Serjeantson, 2002), Munich (Serjeantson, 2005) and Groningen (Serjeantson, 2010). For the meeting held in Iași (Romania) in 2012, she edited the proceedings with the main organiser, Luminita Bejenaru (Bejenaru and Serjeantson, 2014).

Dale's contribution to bird studies, however, long pre-dates the Southampton meeting. Her original interest in birds can probably be traced back to her work in Scotland (e.g. Serjeantson, 1988), a country with which she has maintained a very close association over the years (Fig. 3). Shoreline sites in Scotland are often rich in sea bird bones, thus providing excellent opportunities for the exploration of subsistence practices of those coastal communities. Since her early interest in the eighties, this remained an area of substantial research for Dale in following years (Serjeantson, 1998, 2001, 2005, 2007a, 2007b, 2014, 2017).

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Fig. 1. Participants to the 9th ICAZ Bird working group meeting. Photo by Helene Benkert.



Fig. 2. Dale Serjeantson with the organising committee of the 9th ICAZ Bird Working Group Meeting. From left to right: Ged Poland, Chiara Corbino, Dale Serjeantson, Evelyne Browaeys, Polydora Baker, Fay Worley, Umberto Albarella (unfortunately Jacqui Mulville could not make the meeting). Photo by Helene Benkert.

The best known of Dale's early works on birds is, however, her seminal atlas of bird bone identification, which she published with Alan Cohen, who made the drawings (Cohen and Serjeantson, 1986, 1996). Although the book aims for generic and preliminary identifications, and – like all atlases – cannot replace a reference collection, it was published at a time when literature of this kind was very difficult to access (before the age of internet, pdfs, and emails). Bone specialists, therefore, were extremely eager to use such a rare resource. Still today the atlas maintains its validity and usefulness, and copies can be found in almost any zooarchaeology lab across the world.

Dale's greatest achievement in archaeo-ornithology is, however, most likely to be identified in her wonderful book on *Birds* published as part of the Cambridge Manuals in Archaeology series (Serjeantson, 2009). This has now become a classic and is the fundamental resource

to use in exploring the potential of the study of bird bones from archaeological sites. More than any others, this is probably the publication that finally established her credentials as 'the Bird Lady' of the archaeology world! Following her long-legacy of work on birds and bird bones, Dale wrote this seminal book during her early retirement, and her productivity since then has been nothing less than formidable.

As great a contribution to bird studies Dale's work may have been, it should not overshadow the many other areas of archaeological investigation in which she has ventured. The work in Scotland we mentioned before led to the exploration of several other research questions, such as dairy production (Serjeantson and Bond, 2007), which seem to have typified some of the late prehistoric communities at those high latitudes. In this research, Dale was plainly influenced by the work of one of her key mentors – Tony Legge, who contributed so much to our



Fig. 3. A trip to Orkney in the eighties with some friends from Birkbeck College. Dale is in the middle; at the far left is Tony Waldron; on Dale's left is the late Tony Legge, while on her right is another old friend, the late Mark Bracegirdle. Photo provided by Dale Serjeantson and Tony Waldron.



Fig. 4. Dale Serjeantson preparing for a pork roast experiment supposed to replicate cooking patterns seen at the Neolithic site of Durrington Walls (Wiltshire, UK) (1997). Photo by Umberto Albarella.

understanding of early milk exploitation in prehistoric cattle (Legge, 1981).

Early prehistoric husbandry in Britain, from an economic as well as social perspective, has been the one area of archaeology, which provided one of us (UA) with an early opportunity to collaborate with Dale. Her interest in the Neolithic and Bronze Age is due, in no small part, to her study of the large animal bone assemblage from Runnymede, an early/mid-Neolithic and Late Bronze Age settlement from Surrey, Britain (Serjeantson, 1991, 1996, 2006a). In 1991 UA started his long-standing work on the fauna from the late Neolithic enclosure of Durrington Walls (Wiltshire, Britain) and Dale, seeing the potential for interesting parallels with Runnymede, joined him in analysing the taxonomic aspects of the assemblage, and its potential for ritual/feasting interpretation (Fig. 4). After a few years, this provided the opportunity to produce a publication, which has become influential in Neolithic studies (Albarella and Serjeantson, 2002). She also worked on the – admittedly scanty – animal bones from the iconic site of Stonehenge (Serjeantson, 1995). Following her research at Durrington Walls this was especially significant because of the potential complementary function of the two sites (Parker Pearson et al., 2006). Stimulated by her work on prehistoric monuments in southern Britain (another example is Worley and Serjeantson, 2014), Dale would continue publishing extensively on the subject of prehistoric husbandry, but it is worth singling out here her very valuable review of the zooarchaeological evidence for the Neolithic and Early Bronze Age of southern Britain (Serjeantson, 2011).

In 1991, an important event occurred in Dale's career, when she was appointed as director of the Faunal Remains Unit at the University of Southampton. This was a position funded by English Heritage (now Historic England) which provided her with the opportunity to study animal bone assemblages from a great range of different sites from southern England, as well as engage in teaching and dissertation supervision. This would eventually also provide her with the opportunity to work closely with yet another of us (JM). She continued working in Southampton for ten years, until her early retirement in 2001, and in this period she trained several researchers, who would then become established in the world of zooarchaeology.

Although her interest in the Middle Ages was long-standing (e.g. Serjeantson and Waldron, 1989), it was during her Southampton years that this became more clearly established. Another project that would keep Dale occupied for many years was the study and, in some cases, re-analysis of several medieval assemblages from the town of Winchester (Hampshire, southern Britain; Serjeantson and Rees, 2009) – fittingly, the town that eventually became her home! The work at Winchester allowed her to explore many questions that although not new to her, certainly offered material for a rekindled interest. These would range from site formation processes to urban life, food provision, trade and craft. Another area of medieval life that became of special interest for her was the exploration of monastic diet and behaviour. The opportunity was provided by the study of a number of highly informative ecclesiastical assemblages, in which birds, once again, played an important role (Powell et al., 2001; Ayers et al., 2003; Serjeantson et al., 2018).

While busy researching the zooarchaeology of the Middle Ages, Dale became increasingly aware of the need for archaeologists and historians to work together, as the two lines of evidence can contribute to filling respective knowledge gaps. She had an especially well-ingrained propensity to see the complementarity of different strands of humanities-based research, as her first degree from the University of St Andrews, Scotland, was in English Language and Literature. Archaeology had only been a slightly later interest, developed with a Diploma at Birkbeck College (London), where she met Tony Legge, Peter Rowley-Conwy, Alan Cohen, Tony Waldron and other friends who were going to play an important part in her personal and professional life.

Dale's quest for interdisciplinarity led her, in the early 1990s, to co-promote the creation of the so-called Diet Group, made of archaeologists and historians of the (mainly British) Middle Ages, exploring

the topics of food consumption and diet. To this day, the group meets twice a year in Oxford, to discuss themes of common interest. The Diet Group has, for almost thirty years, represented a formidable tool for information-exchange across disciplines and has profoundly influenced all those who have been involved with it over the years. A volume celebrating the ten years of the existence of the group (Woolgar et al., 2006) has Dale as one of its co-editors and includes two chapters by her, on fish (Serjeantson and Woolgar, 2006) and birds (Serjeantson, 2006b).

In short, Dale Serjeantson's body of work is hugely impressive (and growing), but, seen in isolation, does not give full justice to the role that she has had in the archaeological community. Invariably friendly and helpful, Dale has supported and encouraged several generations of students and young researchers over the duration of her career. Furthermore, she continues to promote and engage with the professional community including through attending and contributing to PZG (Professional Zooarchaeology Group) meetings, at which her expertise and company are greatly appreciated. She has also been a wonderful colleague to work with; intellectually challenging and stimulating, as well as always ready for a joke, a laugh or the occasional impertinent comment, Dale has left a very positive mark in all places where she has worked – Birkbeck College, the Institute of Archaeology in London and the University of Southampton. It was obvious, during the 2018 Sheffield conference, that the affection and admiration that was expressed for her was entirely genuine. Fortunately, this is a story that is bound to continue, and the proceedings of this conference only represent a temporary tribute to a career that has produced a formidable contribution to our understanding of the human past and unquestionably holds a few more gems in store.

3. This volume

The importance of birds in human life is undeniable. They affect current human societies profoundly, but the human-bird relationship was arguably even more important in the past, when people were in closer contact with the natural world than today. Birds, in their domesticated and wild forms, have greatly contributed to subsistence, economy, social structure and ideology of human communities. All these aspects are explored in the 18 contributions presented in this volume – and further exploration will be available in the second volume of these proceedings. The range of methodological approaches and research themes on display is a fitting tribute to Dale Serjeantson's work as, at one point or the other of her career, she has explored them all, indicating the way towards an integrated, inter-disciplinary, and holistic approach to our study of the human past.

Here we would like to identify some of the common threads in the published contributions, and summarise the main methodological approaches and research themes that are explored.

It is perhaps inevitable that a common concern across many of the contributions is the difficulty in the taxonomic identification of bird bones, which Dale tried to facilitate with her well-known bird bone atlas (Cohen and Serjeantson, 1986, 1996). Most papers included in this volume provide some contribution towards the problem. It is worth, however, singling out the innovative contribution of Demarchi et al. (2020) and their attempt to identify the occurrence of bird species through eggshells and their protein make-up. Another extremely original approach to the problem is provided by an even more indirect source of bird occurrence – oribatid mites – which are discussed by Llorente-Rodríguez et al. (2020). This is very much a new area of investigation, which is bound to be further developed in the future. More traditional approaches, including biometrical and osteomorphological methods, are developed anew to support interpretation of the diverse avian economy described by de Groene et al. (2020), and emphasise the continuing need for comprehensive reference collections and baseline datasets.

The estimation of taxonomic occurrence and variability is core to

bird studies in archaeology and is the basis that allows many other questions to be further investigated. The subject is a specific focus of several papers, especially Goffette's (2020) contribution, which shows how different archaeological structures tend to produce different ranges of bird taxa (a good lesson for all of us to consider). The range and type of exploited bird species can of course change through time and such diachronic analysis can provide important information about cultural shifts, a subject expressly investigated by Laroulandie et al. (2020) for the Mid-to Late French Palaeolithic and Lloveras et al. (2020) for the Iberian Epipalaeolithic. It is also important to analyse how variable bird distribution is within a site, as this can be linked to the occurrence of specific activity areas, as demonstrated in Yeomans and Richter's (2020) spatial investigation of a Pre-Pottery Neolithic site in Jordan. The degree of diversity in the use (presumably consumption) of birds can also be associated with social status, as demonstrated in Gál's (2020) case study from medieval Hungary. This is a point also highlighted by Goffette in his methodological paper. Although the range and type of birds found on an archaeological site can be a reflection of patterns of human behaviour, it is also very important to evaluate how this may be dependent on recovery and analytical bias. Many bird species are of small size and their bones can easily be overlooked during excavation. The importance of appropriate methods of bone recovery, especially sieving, is therefore highlighted in contributions by Gál (2020), Goffette (2020) and Roberts et al. (2020), among others.

Birds have many different meanings for human societies, and one of the most important is as a source of food – the widespread and abundant consumption of chicken meat in modern societies is a sufficient reminder of this phenomenon. Demarchi et al. (2020), Dyer (2020), Lloveras et al. (2020), and Walker and Meijer (2020) emphasise this aspect of bird exploitation, though food consumption contributes to most other papers too. Yeomans and Richter (2020) also direct our attention to the use of bird fat, in addition to meat. Fat was an essential energy source in the past, as the flesh of most exploited animals was on average much leaner than in modern domesticates. Occurrence and frequency of bird species can also help us in the understanding of ancient environments, a subject that plays a central role in Roberts et al.'s (2020) paper. We must, of course, consider that archaeological sites act as filters of the surrounding environment, rather than direct representations. Humans do hunt and forage selectively, which represents a difficulty in palaeoenvironmental reconstructions, but it also provides an opportunity to investigate the nature and size of catchment areas. Studies of ancient environments and habitats are also closely related to biogeography – where did different bird species live in the past? – which represents a core theme in Corona-M and Cruz Silva's (2020) study of Late Pleistocene turkey in Mexico (and its subsequent domestication).

Birds are, of course, the quintessential migratory animal, which means that, for many species, occurrence on an archaeological site cannot necessarily be equated to local breeding. The extent to which breeding can be demonstrated through the archaeological evidence is discussed in the contributions by Llorente-Rodríguez et al. (2020), Gál (2020), de Groene et al. (2020), and, particularly, Bocheński and Tomek (2020). In their study of a cave site in Poland, these latter authors suggest that the occurrence of a medullary deposit in galliform bones is indicative of birds killed during their reproductive season. Medullary bone is a calcium deposit occurring in the bones of female birds which contributes to the production of eggshell and therefore only occurs during the laying season. This leads us to another important theme in archaeological bird studies – seasonality. Since many bird species are migratory, their arrival, as well as departure, has typically signified and symbolised the seasonal cycle. For instance, the arrival of swallows in the northern hemisphere is a typical sign of the beginning of spring – famously celebrated in literature, art and religion. Migration also means that, as a food resource, some birds were only available in certain seasons, with important implications for the diversification of human activities and behaviours at different times of the year.

Seasonality is therefore a common theme in bird studies, including those presented in this volume, but plays an especially prominent part in the papers by Bocheński and Tomek (2020), and Yeomans and Richter (2020).

Another typical dilemma in the analysis of bird bones from archaeological sites is the origin of the bird bone accumulation – is this natural or anthropogenic? This can be an especially difficult question to address in cave deposits, as discussed by Bocheński and Tomek (2020), as well as Lloveras et al. (2020). One way to tackle this problem is careful taphonomic analysis, namely the study of all modifications occurring to the bones after the death of the animal. Taphonomy is also carefully investigated by Yeomans and Richter (2020), especially in terms of human-induced modifications on bird bones. These authors further deduce aspects of bird use and processing from the distribution of body parts, a subject that is more typically associated with mammal bone studies (due to the larger average size of a mammal carcass) but that equally holds potential in the analysis of bird bones. Marks of bone modification produced by people are often associated with carcass preparation and consumption (e.g. butchery marks), but they can also be linked to the making of bone objects (e.g. Laroulandie et al., 2020; Mannernmaa and Rainio, 2020) or the extraction of feathers (e.g. Lloveras et al., 2020).

Birds are and have been far more than a mere source of proteins for human societies and, even when eaten, may have constituted more than simply food. This is another common theme across many of the papers presented here, but it is especially developed in a number of them. The link between birds and social status is particularly clear in Bartosiewicz's (2020) account of the introduction of domestic turkey to Hungary. He suggests that, as a recent introduction, turkey may have initially been regarded as luxury food. At the other end of the social spectrum, Dyer (2020) investigates the keeping and consumption of poultry in lower status communities in late medieval England. The nature of bird exploitation in this social context also helps us to characterise contemporary culture, in this case of peasant society. Moving from the social to ritual, two interesting papers dealing with different parts of the world – Roman Britain (Holmes, 2020) and native North-America (Watson, 2020) – explore the symbolic value of the eagle in diverse societies. Holmes' paper also gives an insight into military culture. Using a case-study from medieval and post-medieval Norway, Walker and Meijer (2020) inform us about other, not directly food-related, aspects of past human activities – entertainment, as exemplified by the cruel practice of cockfighting, and trade, suggested through the variety of chicken breeds available. The diversity of chicken types and sizes is also discussed in the paper by de Groene et al. (2020), who demonstrate that the 'improvements' in chicken size that occurred during the Roman period in Britain were sustained in early medieval times.

Although this is predominantly a volume based on traditional zooarchaeology, and in particular the study of animal bones from archaeological sites, it is refreshing to see that many, arguably most, authors adopt a number of different approaches and use complementary lines of evidence. The biomolecular study of eggshells (Demarchi et al., 2020) and the use of mites for bird taxonomic identification (Llorente-Rodríguez et al., 2020) have already been discussed, but there are other approaches worth mentioning. Mannernmaa and Rainio (2020), for instance, use experimental archaeology to suggest that bird bone objects from Mesolithic Russia were likely to have been used as acoustic devices. Bartosiewicz's (2020) interpretation of the Hungarian turkey also relies on etymology and linguistics. Documentary and iconographic sources are mentioned in several papers (e.g. Watson, 2020; Holmes, 2020), but Dyer's (2020) paper in particular discusses medieval poultry keeping from the perspective of the textual evidence. Hinton's (2020) work uses both old texts and images to tackle a different and very interesting subject – how were birds fed, as opposed to how they contributed to human food.

In summary, taken together, the contributions to this volume show

how the study of bird remains in archaeology can help our understanding of virtually all aspects of past human life, ranging from the economic, to the social, ritual and ideological. The coverage is inevitably punctuated, but forthcoming papers in the second volume will round out the range and scope of bird bone studies illustrated here, revealing avian zooarchaeology to be a truly holistic discipline and placing birds at the centre of human lives.

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References

- Albarella, U., Serjeantson, D., 2002. A passion for pork: butchery and cooking at the British Neolithic site of Durrington Walls. In: Miracle, P., Milner, N. (Eds.), *Consuming Passions and Patterns of Consumption*. McDonald Institute, Cambridge, pp. 33–49.
- Ayres, K., Locker, A., Serjeantson, D., 2003. The medieval abbey: food consumption and production. In: Hardy, A., Dodd, A., Keevill, G. (Eds.), *Aelfric's Abbey: Excavations at Eynsham Abbey, Oxfordshire, 1989–1992*. Oxford University School of Archaeology/Oxford Archaeology, Oxford, pp. 341–432.
- Bartosiewicz, L., 2020. Turkey (*Meleagris gallopavo* Linné, 1758) remains from Hungary. *Quat. Int.* in this issue.
- Bejanaru, L., Serjeantson, D., 2014. Birds and archaeology: new research. *Int. J. Osteoarchaeol.* 24, 245–246. <https://doi.org/10.1002/oa.2396>.
- Bocheński, Z., Tomek, T., 2020. Whodunit? Clues on bird remains from Oblazowa Cave (southern Poland) reveal their origin. *Quat. Int.* in this issue.
- Cohen, A., Serjeantson, D., 1986. *A Manual for the Identification of Bird Bones from Archaeological Sites*. Codek Press, London.
- Cohen, A., Serjeantson, D., 1996. *A Manual for the Identification of Bird Bones from Archaeological Sites*, second ed. Archetype Press, London.
- Corona-M, E., Cruz Silva, J.A., 2020. Modelling the prehistoric geographical distribution of the genus *Meleagris*. *Quat. Int.* in this issue.
- De Groene, D., Poland, G., Browaeys, E., Rizzetto, M., 2020. Bird exploitation in an Early Anglo-Saxon community: taxonomic and biometrical investigations at West Stow. *Quat. Int.* in this issue.
- Demarchi, B., Presslee, S., Saskalauskaite, J., Fischer, R., Best, J., 2020. The role of birds at Catalhöyük revealed by the analysis of eggshell. *Quat. Int.* in this issue.
- Dyer, C., 2020. Peasants and poultry in England, 1250–1540. *Quat. Int.* in this issue.
- Gál, E., 2020. Remains of small domestic and game birds from medieval sites in Hungary. *Quat. Int.* in this issue.
- Goffette, Q., 2020. Archaeological structures as factors affecting bird abundance and spectra in archaeological contexts from medieval and modern Belgium. *Quat. Int.* in this issue.
- Hinton, D., 2020. Feeding birds in medieval England. *Quat. Int.* in this issue.
- Holmes, M., 2020. Legends, legions and the Roman eagle. *Quat. Int.* in this issue.
- Laroulandie, V., Morin, E., Soulier, M.-C., Castel, J.-C., 2020. Bird procurement by humans during the middle and early upper paleolithic of europe: new data for the aurignacian of southwestern France. *Quat. Int.* in this issue.
- Legge, A.J., 1981. Aspects of cattle husbandry. In: Mercer, R. (Ed.), *Farming Practice in British Prehistory*. Edinburgh University Press, pp. 169–181.
- Llorente-Rodríguez, L., González-Ibáñez, A., Morales-Muñiz, A., 2020. Phoretic oribatids (*Acari*, *Oribatida*) as bird bioindicators? Insights from the site of Tabacalera (Gijón, N Spain, 6th–7th centuries AD). *Quat. Int.* in this issue.
- Lloveras, L., Salazar, R., García-Argüelles, P., Nadal, J., 2020. Birds and Epipalaeolithic hunter-gatherers in northeast Iberia. The case of the Balma del Gai site. *Quat. Int.* in this issue.
- Mannermaa, K., Rainio, R., 2020. Needle case, sound instrument or something else? A worked and ornamented swan (*Cygnus* sp.) ulna from a Late Mesolithic male burial, Yuzhnyi Oleniy Ostrov, Northwest Russia. *Quat. Int.* in this issue.
- Parker Pearson, M., Pollard, J., Richards, C., Thomas, J., Tilley, C., Welham, K., Albarella, U., 2006. Materializing Stonehenge: the Stonehenge riverside project and new discoveries. *J. Mater. Cult.* 11, 227–261. <https://doi.org/10.1177/135918350603024>.
- Powell, A., Serjeantson, D., Smith, P., 2001. Food consumption and disposal: the animal remains. In: Hicks, M., Hicks, A. (Eds.), *St Gregory's Priory, Northgate, Canterbury: Excavations 1988–1991*. Canterbury Archaeological Trust, Canterbury, pp. 289–333.
- Roberts, J., Weeks, L., Fillios, M., Cable, C., Youssef al-Aali, Y., Boraik, M., Zein, H., 2020. The bird remains from Saruq al-Hadid: insights into human activity and the environment in late prehistoric southeastern Arabia. *Quat. Int.* in this issue.
- Serjeantson, D., 1988. Archaeological and ethnographic evidence for seabird exploitation in Scotland. *Archaeozoologia II* 1–2, 209–224.
- Serjeantson, D., 1991. 'Rid gras de bones': a taphonomic study of the bones from midden deposits at the Neolithic and Bronze age site of Runnymede, Surrey, England. *Int. J. Osteoarchaeol.* 1, 73–89. <https://doi.org/10.1002/oa.1390010203>.
- Serjeantson, D., 1995. Animal bone. In: Cleal, R.M.J., Walker, K.E., Montague, R. (Eds.), *Stonehenge in its Landscape: Twentieth-Century Excavations*. English Heritage, London, pp. 437–451.
- Serjeantson, D., 1996. The animal bones. In: Needham, S., Spence, T. (Eds.), *Runnymede Bridge Research Excavations. Volume 2: Refuse and Disposal at Area 16 East, Runnymede*. British Museum Press, London, pp. 194–223.
- Serjeantson, D. (Ed.), 1997. *Subsistence and Symbol: Papers from the International Council for Archaeozoology Bird Group meeting, 1995, London*. *Int. J. of Osteoarchaeol.* 7.
- Serjeantson, D., 1998. Birds: a seasonal resource. *Environ. Archaeol.* 3, 23–33. <https://doi.org/10.1179/env.1998.3.1.23>.
- Serjeantson, D., 2001. The great auk and the gannet: a prehistoric perspective on the extinction of the great auk. *Int. J. Osteoarchaeol.* 11, 43–55. <https://doi.org/10.1002/oa.545>.
- Serjeantson, D., 2002. Goose husbandry in Medieval England, and the problem of ageing goose bones. *Acta Zool. Cracov.* 45 (special issue), 39–54.
- Serjeantson, D., 2005. Archaeological records of a gadfly petrel *Pterodroma* sp. from Scotland in the first millennium AD. In: Grupe, G., Peters, J. (Eds.), *Feathers, Grit and Symbolism: Birds and Humans in the Ancient Old and New Worlds*, vol. 3. *Documenta Archaeobiologiae*, pp. 235–246.
- Serjeantson, D., 2006a. Food or feast at neolithic Runnymede. In: Serjeantson, D., Field, D. (Eds.), *Animals in the Neolithic of Britain and Europe*. Oxbow, Oxford, pp. 113–134.
- Serjeantson, D., 2006b. Birds: food and a mark of status. In: Woolgar, C.M., Serjeantson, D., Waldron, T. (Eds.), *Food in Medieval England: Diet and Nutrition*. Oxford University Press, Oxford, pp. 131–147.
- Serjeantson, D., 2007a. Bird bones. In: Dockrill, S.J. (Ed.), *Investigations in Sanday, Orkney. Vol 2: Tofts Ness, Sanday: an Island Landscape through Three Thousand Years of Prehistory*. The Orcadian, Kirkwall, pp. 216–227.
- Serjeantson, D., 2007b. The bird bones. In: Hunter, J. (Ed.), *Investigations in Sanday, Orkney. Vol 1: Excavations at Pool, Sanday. The Orcadian*, Kirkwall, pp. 279–285.
- Serjeantson, D., 2009. *Birds*. Cambridge Manuals in Archaeology. Cambridge University Press, Cambridge.
- Serjeantson, D., 2010. Ravens and crows in iron age Britain: the danebury corvids reconsidered. In: Prummel, W., Zeiler, J., Brinkhuizen, D. (Eds.), *Birds in Archaeology: Proceedings of the 6th Meeting of the ICAZ Bird Working Group in Groningen*. Barkhuis & Groningen University Library, Groningen, pp. 175–186.
- Serjeantson, D., 2011. Review of Animal Remains from the Neolithic and Early Bronze Age of Southern Britain (4000 BC - 1500 BC). *Environmental Studies Report*. Research Department Report Series 29-2011. English Heritage, London.
- Serjeantson, D., 2014. The diverse origins of bird bones from Scottish coastal sites. *Int. J. Osteoarchaeol.* 24, 279–288. <https://doi.org/10.1002/oa.2387>.
- Serjeantson, D., 2017. Fishing, wildfowling, and marine mammal exploitation in northern Scotland from prehistory to Early Modern times. In: Albarella, U., Rizzetto, M., Russ, H., Vickers, K., Viner-Daniels, S. (Eds.), *The Oxford Handbook of Zooarchaeology*. Oxford University Press, Oxford, pp. 167–177. <https://doi.org/10.1093/oxfordhb/9780199686476.013.16>.
- Serjeantson, D., Bond, J., 2007. Cattle and sheep husbandry: evidence for dairying from analysis of tooth eruption and wear. In: Dockrill, S.J. (Ed.), *Investigation in Sanday, Orkney. Vol 2: Tofts Ness, Sanday. The Orcadian*, Kirkwall, pp. 202–206.
- Serjeantson, D., Waldron, T. (Eds.), 1989. *Diet and Crafts in Towns: the Evidence of Animal Remains from the Roman to the Post-Medieval Periods*. BAR British Series, Oxford.
- Serjeantson, D., Woolgar, C.M., 2006. Fish consumption in medieval England. In: Woolgar, C.M., Serjeantson, D., Waldron, T. (Eds.), *Food in Medieval England: Diet and Nutrition*. Oxford University Press, Oxford, pp. 102–130.
- Serjeantson, D., Irving, B., Hamilton-Dyer, S., 1993. Bird bone taphonomy from the inside out: the evidence of gull predation on the Manx Shearwater *Puffinus puffinus*. *Archaeofauna* 2, 191–204.
- Serjeantson, D., Crabtree, P., Mulville, J., Ayres, K., Ingram, C., Locker, A., 2018. How pious? How wealthy? The status of Eynsham and St Albans Abbeys between the 8th to the 12th centuries re-examined in the light of their food consumption. In: Jervis, B. (Ed.), *The Middle Ages Revisited: Studies in the Archaeology and History of Medieval Southern England Presented to Professor David A Hinton*. Archaeopress, Oxford, pp. 115–140.
- Serjeantson, D.J., Rees, H. (Eds.), 2009. *Food, Craft and Status in Medieval Winchester: the Plant and Animal Remains from the Suburbs and City Defences*. Winchester Excavations, vol. 10 Winchester Museums, Winchester.
- Walker, S., Meijer, H., 2020. More than food: evidence for different breeds and cock-fighting in *Gallus gallus* bones from Medieval and Post-Medieval Norway. *Quat. Int.* in this issue.
- Watson, J., 2020. Bald eagles and the Thunderbird myth: birds in pre-Contact ceremonialism on Martha's Vineyard, USA. *Quat. Int.* in this issue.

- Woolgar, C.M., Serjeantson, D., Waldron, T. (Eds.), 2006. Food in Medieval England: Diet and Nutrition. Oxford University Press, Oxford.
- Worley, F., Serjeantson, D., 2014. The importance of red deer antlers for the creation of Neolithic monuments. In: Baker, K., Carden, R., Madgwick, R. (Eds.), Deer and People. Windgather Press and Oxbow Books, Oxford, pp. 119–131.
- Yeomans, L., Richter, T., 2020. Preservation of seasonally abundant waterfowl? Analysis of faunal remains from middens at the Pre-Pottery Neolithic A site of Shubayqa 6 in northeast Jordan. *Quat. Int* in this issue.

Umberto Albarella*

Department of Archaeology, University of Sheffield, UK

E-mail address: u.albarella@sheffield.ac.uk.

Polydora Baker

National Specialist Services, Historic England, UK

Evelyn Browaeys

Department of Archaeology, University of Sheffield, UK

Chiara A. Corbino

Department of Archaeology, University of Sheffield, UK

Jacqui Mulville

School of History, Archaeology and Religion, Cardiff University, UK

Ged Poland

Department of Archaeology, University of Sheffield, UK

Fay Worley

National Specialist Services, Historic England, UK

* Corresponding author.